

Date: Tuesday, 4/4/2006 1:32:25 PM
User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: SADDLE FITTING, FWD (OUTBOARD/INBOARD)																																																								
Job Number	: 26511	Part Number	: D2571																																																								
Estimate Number	: 10530	Drawing Number	: D2571 REV E																																																								
P.O. Number	: N/A	Project Number	: N/A																																																								
This Issue	: 4/4/2006	Drawing Revision	: E																																																								
Prsht Rev.	: NC	Material	: N/A																																																								
First Issue	: N/A	Due Date	: 4/30/2006																																																								
Previous Run	: 25996	Qty:	8	Um:	Each																																																						
Written By	<u>SJG</u> COMMENT BELOW																																																										
Checked & Approved By	<u>JK</u> 06.04.04																																																										
Comment	: Est: 102.10.02 Re-format; Change to Dwg Rev. D & incorporated D2572KJ																																																										
Additional Product																																																											
<p>Job Number: </p> <table border="1"> <thead> <tr> <th>Seq. #:</th> <th>Machine Or Operation:</th> <th>Description :</th> <th colspan="3"></th> </tr> </thead> <tbody> <tr> <td>1.0</td> <td>D6101007</td> <td>7075-T7351 8.25X7.75X2.5</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6"> Comment: Qty.: 1.0000 Each(s)/Unit Total : 8.0000 Each(s) 7075-T7351 8.25X7.75X2.5 Make from D6101-007 billet for D2571 Ensure that grain is along 7.75" length <i>B25205 x1</i> Batch No: <i>B24893 x7</i> <i>J.G</i> <i>06/05/07</i> </td> </tr> <tr> <td>2.0</td> <td>HAAS1</td> <td>HAAS CNC VERTICAL MACHINING #1</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6"> Comment: HAAS CNC VERTICAL MACHINING #1 Program Batch No. <i>336511</i> Double check by: <i>SD</i> 1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets <i>EP/J.G</i> 3-Machine Step No 3 per Folio FA051 and inspect per attached Dimension Sheets 4-Deburr and remove all machining marks 5-Tumble to remove sharp edges. <i>EP/J.G</i> <i>06/05/07</i> </td> </tr> <tr> <td>3.0</td> <td>MILLING CONV.</td> <td>CONVENTIONAL MILLING MACHINE</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6"> Comment: CONVENTIONAL MILLING MACHINE Machine keyway as per dwg D2571 & D2572 <i>EP/J.G</i> <i>06/05/11</i> </td> </tr> <tr> <td>4.0</td> <td>QC2</td> <td>INSPECT PARTS AS THEY COME OFF MACHINE</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6"> Comment: INSPECT PARTS AS THEY COME OFF MACHINE <i>EP/J.G</i> <i>06/08/12</i> </td> </tr> </tbody> </table>						Seq. #:	Machine Or Operation:	Description :				1.0	D6101007	7075-T7351 8.25X7.75X2.5				Comment: Qty.: 1.0000 Each(s)/Unit Total : 8.0000 Each(s) 7075-T7351 8.25X7.75X2.5 Make from D6101-007 billet for D2571 Ensure that grain is along 7.75" length <i>B25205 x1</i> Batch No: <i>B24893 x7</i> <i>J.G</i> <i>06/05/07</i>						2.0	HAAS1	HAAS CNC VERTICAL MACHINING #1				Comment: HAAS CNC VERTICAL MACHINING #1 Program Batch No. <i>336511</i> Double check by: <i>SD</i> 1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets <i>EP/J.G</i> 3-Machine Step No 3 per Folio FA051 and inspect per attached Dimension Sheets 4-Deburr and remove all machining marks 5-Tumble to remove sharp edges. <i>EP/J.G</i> <i>06/05/07</i>						3.0	MILLING CONV.	CONVENTIONAL MILLING MACHINE				Comment: CONVENTIONAL MILLING MACHINE Machine keyway as per dwg D2571 & D2572 <i>EP/J.G</i> <i>06/05/11</i>						4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE				Comment: INSPECT PARTS AS THEY COME OFF MACHINE <i>EP/J.G</i> <i>06/08/12</i>					
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2571 PAR #: N/A Fault Category: Prod/Machined part NCR: Yes No DQA: Date: 26/03/17
 QA: N/C Closed: Date: 06-05-30

NCR: <u>26511</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/05/08	2	inside bores too deep by 0.060" chamber on flange contour to deep 0.060" "zero in "Z" on the second vice was off 0.060" operator error.	<u>SD</u> <u>Q2510</u>	change the Z zero on second vice Part is scrap. Replace.	<u>EP</u> 06/05/08	<u>J</u>	<u>SD</u> 06/05/08	<u>J</u>
06/05/09	2	Dimension "A1" 2.000 ^{+0.020} _{-0.005} is measured 1.995"	<u>PA</u> <u>per QSF</u> <u>04A</u>	OKAY, per attached e-mail	<u>Att</u> 06.05.09	<u>J</u> 06-05-08	<u>PA</u> per QSF 04A	<u>J</u> 06-05-08

NOTE: Date & initial all entries

Date: Tuesday, 4/4/2006 1:32:26 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE FITTING, FWD (OUTBOARD/INBOARD)

Job Number: 26511

Part Number: D2571

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

MVS 06/05/15 8

6.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

a.m 06-05-15

(8)

7.0 POWDER COATING POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

a.m 06-05-16

(8)

8.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

SL 06/05/16

(8)

9.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST478

SL 06/05/16

(8)

10.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

SL 06/05/16

(8)

Job Completion



SL 06/05/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD				Work Order: 26511				
Description: Saddle, Fwd Outboard				Part Number: D2571				
Inspection Dwg: D2571 Rev. E				Page 1 of 1				

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				Spec Actual C-Mil	2	3	4		
A	0.438	0.443	DT8682	0.440	0.440	0.440	0.440		
B	1.745	1.755		1.745	1.748	1.745	1.747		
C	3.495	3.505		3.498	3.496	3.497	3.497		
D	1.745	1.755		1.745	1.748	1.745	1.747		
E	7.990	8.010		8.005	8.003	8.006	8.009		
F	0.490	0.510		0.496	0.494	0.500	0.498		
G	0.257	0.262	DT8683	0.259	0.259	0.259	0.258		
H	0.375	0.380	DT8684	0.376	0.376	0.376	0.376		
I	0.490	0.510		0.496	0.501	0.499	0.497		
J	1.174	1.184		1.177	1.177	1.176	1.176		
K	0.558	0.578		0.561	0.562	0.562	0.560		
L	1.174	1.184		1.177	1.177	1.176	1.176		
M	1.490	1.500		1.494	1.495	1.495	1.497		
N	2.495	2.505		2.495	2.498	2.498	2.497		
O	3.869	3.879		3.873	3.873	3.872	3.872		
P	0.115	0.135		0.120	0.126	0.125	0.124		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.250	0.251	0.250	0.251		
S	0.115	0.135		0.123	0.126	0.126	0.125		
T	0.178	0.198		0.188	0.188	0.188	0.186		
U	2.940	2.980		2.966	2.960	2.966	2.960		
V	0.230	0.250		0.238	0.240	0.243	0.239		
W	0.115	0.135		0.116	0.120	0.122	0.119		
X	0.308	0.313		0.308	0.308	0.308	0.309		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.361	0.360	0.362	0.364		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.633	0.630	0.629	0.628		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.249	0.250	0.245	0.244		
AE	1.375	1.395		1.381	1.385	1.383	1.383		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.248	0.253	0.253	0.254		
AI	2.000	2.020		1.995	2.000	2.000	2.000		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by:	EP / J.G	Audited by:	M8
Date:	06/05/11	Date:	06/05/11

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	JL



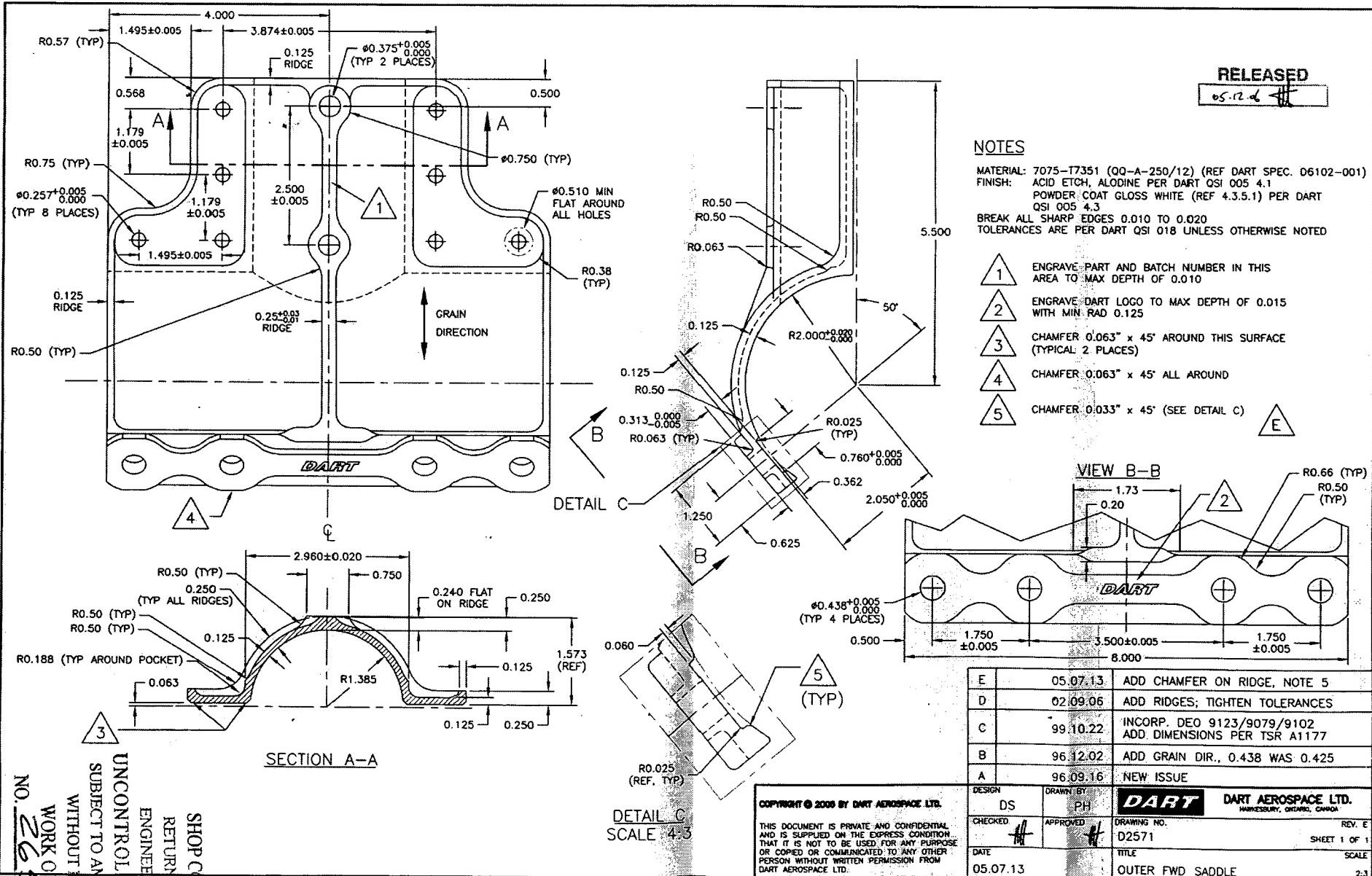
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J	1.174	1.184		1.179	1.178	1.178	1.177		
K	0.558	0.578		0.568	0.569	0.567	0.569		
L	1.174	1.184		1.179	1.179	1.177	1.177		
M	1.490	1.500		1.498	1.499	1.496	1.497		
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Accept/Reject									

Measured by:	EP / J.G	Audited by:	M8
Date:	06/05/11	Date:	06/05/11

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C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	SP



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 26511

Peter Hum

From: David Shepherd [davids@dartaero.com]
Sent: Tuesday, May 09, 2006 10:51 AM
To: Peter Hum
Subject: Re: d2571 saddle bore out of tolerance

If we cannot machine to within tolerance, then I think we should accept the part as is.

David

----- Original Message -----

From: "Peter Hum" <phum@dartaero.com>
To: "David Shepherd (E-mail)" <davids@dartaero.com>
Cc: "Jason Murdoch (E-mail)" <jmurdoch@dartaero.com>
Sent: Tuesday, May 09, 2006 5:47 AM
Subject: d2571 saddle bore out of tolerance

> David,
>
> The D2571 saddle dimension is 1.995" and the tolerance of this part is
> 2.000(+0.020,-0.000). I've attached a few pictures to show the fit on a
> painted skidtube.
>
> Is this deviation acceptable?
>
> Peter Hum
> Mechanical Designer
>
> DART Aerospace Ltd.
> Email...phum@dartaero.com
> Phone...613-632-3336
> Fax.....613-632-4443
>

